

INTERNATIONAL SEARCH REPORT

national Application No

PCT/IB2004/000992

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 H01L23/64 H01L23/498

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H01L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, INSPEC, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>WO 02/054421 A (CHAKRAVORTY KISHORE K ; RODRIGUEZ JORGE P (US); BROWN KENNETH M (US);) 11 July 2002 (2002-07-11) page 1, line 10 - page 2, line 29 page 4, lines 1-28; figure 3 page 5, line 28 - page 6, line 15; figure 4 pages 813-23 page 10, line 24 - page 12, line 2; figure 12 page 12, lines 31-37 page 13, lines 27-31 page 14, lines 10-22 page 15, line 27 - page 16, line 31; figure 16</p> <p style="text-align: center;">----- -/--</p>	1-9

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

A document defining the general state of the art which is not considered to be of particular relevance

E earlier document but published on or after the International filing date

L document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

O document referring to an oral disclosure, use, exhibition or other means

P document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

* & * document member of the same patent family

Date of the actual completion of the international search

13 September 2004

Date of mailing of the international search report

21/09/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
 NL - 2280 HV Rijswijk
 Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
 Fax: (+31-70) 340-3016

Authorized officer

Corchia, A

INTERNATIONAL SEARCH REPORT

national Application No

PCT/IB2004/000992

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6 411 494 B1 (WATT MICHAEL MAN-KUEN) 25 June 2002 (2002-06-25) column 1, line 6 - column 2, line 31 column 5, line 30 - column 6, line 53; figure 1 column 7, line 65 - column 8, line 34; figures 4a-4c column 8, line 63 - column 9, line 4 column 9, lines 29-39; figure 7a column 9, line 58 - column 14, line 65; figures 8-11	1-9
A	US 2003/024732 A1 (NINOMIYA RYOJI) 6 February 2003 (2003-02-06) paragraphs '0008!', '0013! paragraphs '0040! - '0045!; figures 3-5 paragraphs '0066! - '0068!, '0073!; figure 16	1-9
A	US 4 494 172 A (LEARY BURTON ET AL) 15 January 1985 (1985-01-15) column 4, lines 18-59; figures 3-5	1-9
A	US 4 945 399 A (BROWN MICHAEL B ET AL) 31 July 1990 (1990-07-31) column 1, lines 15-54 column 3, lines 3-62; figure 2 column 3, line 64 - column 4, line 42; figure 3	1-9

INTERNATIONAL SEARCH REPORT

Information on patent family members

national Application No

PCT/IB2004/000992

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 02054421	A	11-07-2002	US 2002085334 A1 CN 1484840 T DE 10197124 T0 EP 1384237 A2 GB 2384912 A WO 02054421 A2	04-07-2002 24-03-2004 13-11-2003 28-01-2004 06-08-2003 11-07-2002
US 6411494	B1	25-06-2002	AU 5205801 A WO 0178093 A2 CA 2443551 A1 EP 1273017 A2	23-10-2001 18-10-2001 18-10-2001 08-01-2003
US 2003024732	A1	06-02-2003	JP 3455498 B2 JP 2001345523 A CN 1326312 A TW 486921 B US 2001048592 A1	14-10-2003 14-12-2001 12-12-2001 11-05-2002 06-12-2001
US 4494172	A	15-01-1985	CA 1198829 A1 EP 0086961 A2 JP 58129792 A	31-12-1985 31-08-1983 02-08-1983
US 4945399	A	31-07-1990	DE 3782714 D1 DE 3782714 T2 EP 0262493 A2 JP 1808987 C JP 5019983 B JP 63086554 A	24-12-1992 09-06-1993 06-04-1988 10-12-1993 18-03-1993 16-04-1988